

Appl. No. : **09/595,096**
Filed : **June 15, 2000**

REMARKS

The Applicants have amended Claims 1 and 21 to specify that the claimed method and system are directed to selecting one or more conformations of a ligand likely to bind to a protein and that steps or means for calculating a score indicative of a potential of a protein-ligand complex and selecting one or more optimized ligand positions based on the score are included. Support for selecting one or more conformations of a ligand may be found in the specification, for example, at page 28, paragraph 1. Support for calculating a score indicative of a potential of a protein-ligand complex may be found in the specification, for example, from page 17 to page 20. Support for selecting one or more optimized ligand positions based on the score may be found in the specification, for example, at page 28, paragraph 1 ("scoring function used...as an initial filter to select only a few docked conformations."). Claims 11-20 have been cancelled without prejudice to pursuing these claims in a divisional, continuation, or continuation-in-part application.

Claims 1-10 and 21-30 remain pending in the application. The Applicants have carefully considered all of the Examiner's rejections but respectfully submit that the claims are allowable for at least the following reasons.

Rejections under § 112 – Written Description

The Examiner rejected Claims 1-30 under 35 U.S.C. § 112, ¶ 1 as failing to comply with the written description requirement. The Examiner asserted that a method of identifying a ligand that binds to a protein constituted new matter. The Applicants have herein amended the claims so that they are now directed to selecting one or more conformations of a ligand likely to bind to a protein, thereby obviating the Examiner's rejection. Written description support for the claim amendments are set forth above.

Rejections under § 101 – Method Claims 1-10

In the Office Action, the Examiner suggested that "a method of ranking conformations and selecting a conformation or conformations of a ligand that are likely to bind to a binding site or hot spot of a protein MAY be considered statutory and MAY be useful." Office Action, page 4. The Applicants thank the Examiner for attempting to advance prosecution and providing this

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suggestion. The Applicants have accordingly amended Claims 1-10 so that they are directed to selecting one or more conformations of a ligand likely to bind to a protein. As indicated in the specification, this method provides for the selection of “well docked positions” for a ligand. Specification, page 28, paragraph 1. Such docked positions are a useful tool for prioritizing screening efforts. *See* Specification, page 2 to page 3. Accordingly, the invention claimed in Claims 1-10 provides concrete, tangible, and useful results and is therefore directed to statutory subject matter, as referred to by the Examiner.

Rejections under § 101 – Mean-Plus-Function Claims 11-20

In the Office Action, the Examiner argued that the means-plus-function limitations in Claims 11-20 were either duplicative with Claims 21-30 or directed to a non-statutory program of instructions. The Applicants have cancelled Claims 11-20, thereby obviating the rejection of those claims.

Rejections under § 101 – Storage Device Claims 21-30

The Examiner has previously found that Claims 21-30 are directed to statutory subject matter and did not reject the claims on those grounds. *See* June 2, 2004 Office Action. As noted above and suggested by the Examiner, Claims 21-30 as amended herein are useful for selecting one or more conformations of a ligand likely to bind to a protein. Accordingly, it is respectfully submitted that Claims 21-30 are in condition for allowance.

CONCLUSION

The Applicants respectfully submit that they have overcome all of the Examiner’s rejections by the amendments and remarks herein. Accordingly, the Applicants respectfully submit that the pending claims are allowable and request timely issuance of a Notice of Allowance.

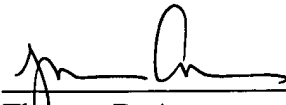
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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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